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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/543,073	07/21/2005	Adolf Gustav Zajber	HM/652PCT	1193
40570	7590	12/29/2005	EXAMINER	
FRIEDRICH KUEFFNER			LIN, ING HOUR	
317 MADISON AVENUE, SUITE 910			ART UNIT	
NEW YORK, NY 10017			PAPER NUMBER	

1725

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/543,073	ZAJBER ET AL.	
	Examiner	Art Unit	
	Ing-Hour Lin	1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because:

I. In specification, there is a lack of section headings:

CROSS-REFERENCE TO RELATED APPLICATIONS;
BACKGROUND OF THE INVENTION;
BRIEF SUMMARY OF THE INVENTION; BRIEF DESCRIPTION OF THE
SEVERAL VIEWS OF THE DRAWING(S); and
DETAILED DESCRIPTION OF THE INVENTION.

II. In page 5, disclosure is written in terms claims 1 and 9. It is improper because the claims can be changed during the examining process.

Appropriate correction is required.

Claim Objections

2. Claim 1 is objected to because of the following informalities: In claim 1, last line, “a soaking furnace” should be changed to –the soaking furnace—because it has antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims 1-4 are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are lack of processing steps. In claim 1, “the cast strand “ and “the vertical casting

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direction”, “the horizontal rolling direction”, “the cast strand”, “the straightening driver rolls”, “the continuous reduced strand”, the deformation of the cast strand”, “the reduced strand”, “the oscillation marks”, “the surface (16)”, “the deformed surface zone”, “the reduced strand”, “the aligned dendrites”, “the original finely crystalline structure”, “the surface zone of the cast stand”, and “the subsequent heat treatment” lack antecedent basis. In claim 2, line 2, “the deformation” lacks antecedent basis. “the desired preliminary section” in claims 3-4 and “a slight reduction of the cast strand” lack antecedent basis.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000197953 in view of Teraoka et al.

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JP '953 (see abstract) substantially teaches the claimed method for producing slabs in a continuous casting machine including the of an oscillating mold 6 and hot-rolling reduction rolls 10 for the purpose of reducing the oscillation mark when the surface temperature of the reduced slab is not less than 500 °C.

JP '953 fails to teach the use of deforming and recrystallizing the casting slab in a hot rolling machine and using a soaking furnace. However, Teraoka et al (col. 5, lines 47+) teach the use of deforming and recrystallizing the casting slab having surface temperature between 900 to 1200 °C in a hot rolling machine 6 including rolls having large diameter and having reduction ratio in the range of 10 to 50 % and a soaking furnace 7 for the purpose of recrystallizing deformed slab and refining the recrystallized grain size for the slab treated in the furnace 7 such that the mechanical properties of the cast slabs can be improved. It would have been obvious to one having ordinary skill in the art to provide JP '953 the use of deforming and recrystallizing the casting slab in a hot rolling machine and a soaking furnace as taught by Teraoka et al in order to effectively improve the mechanical properties of the cast slabs.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000197953 in view of Teraoka et al and further in view of Kajiwara et al.

JP '953 in view of Teraoka et al fails to teach the use of roll diameter of 700 mm. However, Kajiwara et al (col. 4, lines 28+) teach the use of roll diameter of 700 mm (col. 13, lines 32+) in a hot strip mill for the purpose of improving the strip shape and effectively reducing the slab to the required reduction ratio. It would have been obvious to one having ordinary skill

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in the art to provide JP '953 in view of Teraoka et al the use of roll diameter of 700 mm as taught by Kajiwara et al in order to effectively improve the strip shape reduction.

9. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000197953 in view of Teraoka et al and further in view of Maebara et al.

JP '953 in view of Teraoka et al fails to teach the use of heat and deformation treatments in preliminary section or the last rolling reduction. However, Maebara et al (col. 5, lines 7+ and Fig. 5) teach the use of heat and deformation treatments in preliminary sections I and II or the last rolling reduction in III for the purpose of controlling the optimum surface temperature in the range of 900 – 1200 °C and total reduction of greater than 5% and at most 200% for the cast slab and improving the cast surface quality. It would have been obvious to one having ordinary skill in the art to provide JP '953 in view of Teraoka et al the use of heat and deformation treatments in preliminary section or the last rolling reduction as taught by Maebara et al in order to effectively improve the cast surface quality.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ing-Hour Lin whose telephone number is (571) 272-1180. The examiner can normally be reached on M-F (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

I.H.L.

I.-H. Lin

12-21-05

KEVIN KERNS *Kevin Kerns 12/22/05*
PRIMARY EXAMINER